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20/4 thread on top and 40/3 thread on the bottom, will be acceptable in constructing straps.

(g) *Workmanship.* All cushions shall be of first class workmanship and shall be free from defects materially affecting their appearance or serviceability. Cushions classified as “seconds” or “irregular” will not be acceptable under this specification.

[CGFR 65-37, 30 FR 11583, Sept. 10, 1965]

§ 160.048-5 Inspections and tests.¹

(a) *General.* Manufacturers of listed and labeled buoyant cushions shall maintain quality control of the materials used, manufacturing methods and the finished product so as to meet the applicable requirements, and shall make sufficient inspections and tests of representative samples and components produced to maintain the quality of the finished product. Records of tests conducted by the manufacturer and records of materials, including affidavits by suppliers that applicable requirements are met, entering into construction shall be made available to the recognized laboratory inspector or the Coast Guard inspector, or both, for review upon request. Any examinations, inspections and test which are required by the recognized laboratory for listed and labeled devices produced will be conducted by the laboratory inspector at the place of manufacture or other location at the option of the laboratory.

(b) *Lot size and sampling.* (1) A lot shall consist of not more than 1,000 buoyant cushions. A new lot shall be started with any change or modification in materials used or manufacturing methods employed. When a lot of buoyant cushions is ready for inspection, the manufacturer shall notify the recognized laboratory so that they may, at their discretion, assign an inspector to the plant for the purpose of making any tests and inspections deemed necessary. From each lot of buoyant cushions, the manufacturer or the recognized laboratory or U.S. Coast

¹The manufacturer of a personal flotation device must meet 33 CFR 181.701 through 33 CFR 181.705 which require an instruction pamphlet for each device that is sold or offered for sale for use on recreational boats.

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Guard inspector, when assigned, shall select samples in accordance with Table 160.048-5(b)(1) to be tested for buoyancy in accordance with paragraph (e) of this section.

TABLE 160.048-5(b)(1)—SAMPLING FOR BUOYANCY TESTS

Lot size	No. of cushions in sample
200 and under	1
201 to 400	2
401 to 600	3
601 to 1,000	4

(2) For a lot next succeeding one from which any sample cushion failed the buoyancy test, the sample shall consist of not less than 10 specimen cushions to be tested for buoyancy in accordance with paragraph (e) of this section.

(c) *Additional tests.* Unannounced examinations, tests and inspections of samples obtained either directly from the manufacturer or through commercial channels may be made to determine the suitability of a product for listing and labeling, or to determine conformance of a labeled product to the applicable requirements. These may be conducted by the recognized laboratory or the Coast Guard.

(d) *Test facilities.* The laboratory inspector, or the Coast Guard inspector, or both, shall be admitted to any place in the factory where work is being done on listed and labeled products, and either or both inspectors may take samples of parts or materials entering into construction of final assemblies, for further examinations, inspections, or tests. The manufacturer shall provide a suitable place and the apparatus necessary for the performance of the tests which are done at the place of manufacture.

(e) *Buoyancy*—(1) *Buoyancy test method.* Remove the buoyant pad inserts from the cushion and cut three slits in the vinyl film, each not less than 6 inches in length on both sides of each pad. Securely attach the spring scale in a position directly over the test tank. Suspend the weighted wire basket from the scale in such a manner that the basket is weighed while it is completely under water. In order to measure the actual buoyance provided by

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the pads, the underwater weight of the empty basket should exceed the buoyancy of the pads. To obtain the buoyancy of the pads, proceed as follows:

(i) Weigh the empty wire basket under water.

(ii) Place the pads inside the basket and submerge it so that the top of the basket is at least 2 inches below the surface of the water for 24 hours. The tank shall be locked or sealed during this 24-hour submergence period. It is important that after the pads have once been submerged that they shall remain submerged for the duration of the test, and at no time during the course of the test shall they be removed from the tank or otherwise exposed to air.

(iii) After the 24-hour submergence period unlock or unseal the tank and weigh the weighted wire basket with the pads inside while both are still under water.

(iv) The buoyancy is computed as (i) minus (iii).

(2) *Buoyancy required.* The buoyant pads from the cushion shall provide not less than 20 pounds total buoyancy.

[CGFR 65-37, 30 FR 11585, Sept. 10, 1965, as amended by CGFR 70-143, 35 FR 19963, Dec. 30, 1970; CGD 78-008, 43 FR 9772, Mar. 9, 1978]

§ 160.048-6 Marking.

(a) Each buoyant cushion must have the following information clearly marked in waterproof lettering:

(1) In letters that can be read at a distance of 2 feet:

Type IV Personal Flotation Device.

Inspected and tested in accordance with U.S. Coast Guard regulations.

Dry out thoroughly when wet.

(Kapak or Fibrous glass) buoyant material provides a minimum buoyant force of 20 lb.

Do not snag or puncture inner plastic cover.

If pads become waterlogged, replace device. Approved for use on recreational boats only as a throwable device.

U.S. Coast Guard Approval No. 160.048/(assigned manufacturer's No.)/(Revision No.); (Model No.).

(Name and address of manufacturer or distributor.).

(Lot No.).

(Size; width, thickness, and length, including both top and bottom for trapezoidal cushions.).

(2) In letters that are distinctively set off or larger than all other marking, and are at least one-fourth of an inch in height:

WARNING: DO NOT WEAR ON BACK

(b) *Waterproofness of marking.* Marking for buoyant cushions shall be sufficiently waterproof so that after 72 hours submergence in water, it will withstand vigorous rubbing by hand while wet without the printed matter becoming illegible.

[CGFR 65-37, 30 FR 11585, Sept. 10, 1965, as amended by CGFR 70-143, 35 FR 19963, Dec. 30, 1970; CGD 72-163R, 38 FR 8119, Mar. 28, 1973; CGD 75-008, 43 FR 9771, Mar. 9, 1978; CGD 92-045, 58 FR 41608, Aug. 4, 1993; CGD 95-028, 62 FR 51213, Sept. 30, 1997]

§ 160.048-7 Procedure for approval.

(a) *Group approval.* A single group approval will be granted to each manufacturer to cover all buoyant cushions which have materials and construction strictly in conformance with this subpart, which are 2 inches thick, and which are filled with kapok or fibrous glass in accordance with § 160.048-4(c)(1).

(b) *Special approvals.* Special approvals will be granted separately to each manufacturer for each kapok or fibrous glass buoyant cushion he proposes to manufacture which is not included under the group approval provided by paragraph (b) of this section, for example: A kapok or fibrous glass buoyant cushion having cover material not specifically provided for by this subpart; or any buoyant cushion more than 2 inches thick; or any buoyant cushion having a different shape.

(c) A buoyant cushion is approved when it bears the compliance label of the recognized laboratory.

[CGFR 70-143, 35 FR 19963, Dec. 30, 1970, as amended by CGD 72-163R, 38 FR 8119, Mar. 28, 1973; CGD 93-055, 61 FR 13930, Mar. 28, 1996; 61 FR 15162, Apr. 4, 1996]

§ 160.048-8 Recognized laboratory.

(a) A manufacturer seeking Coast Guard approval of a product under this